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Main Injector Weekly Summary

22nd September 2006

Stacking

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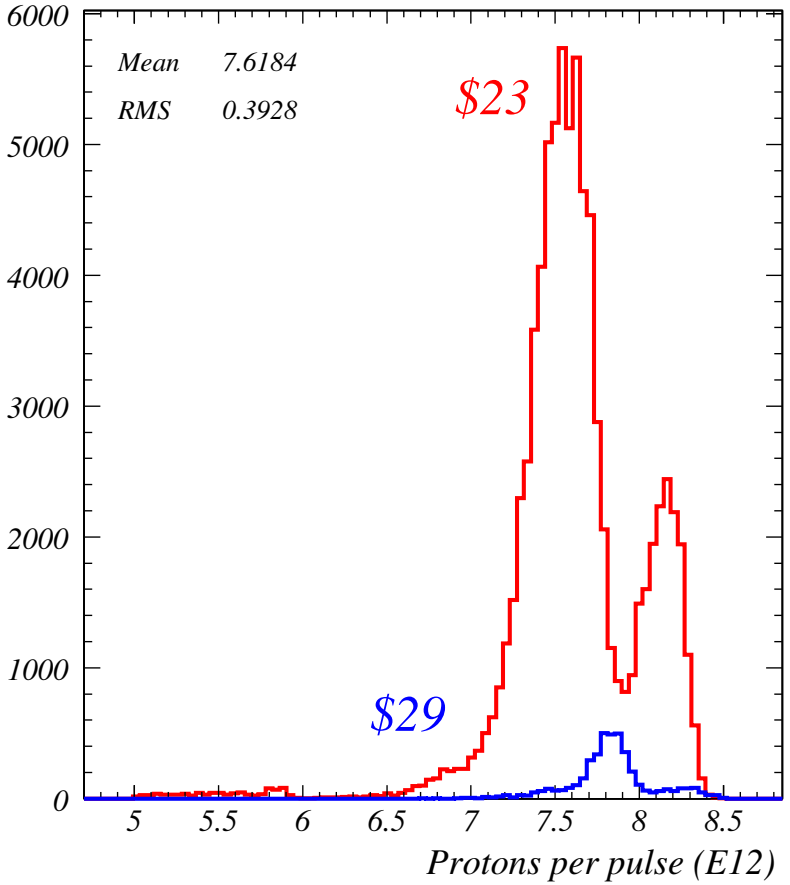
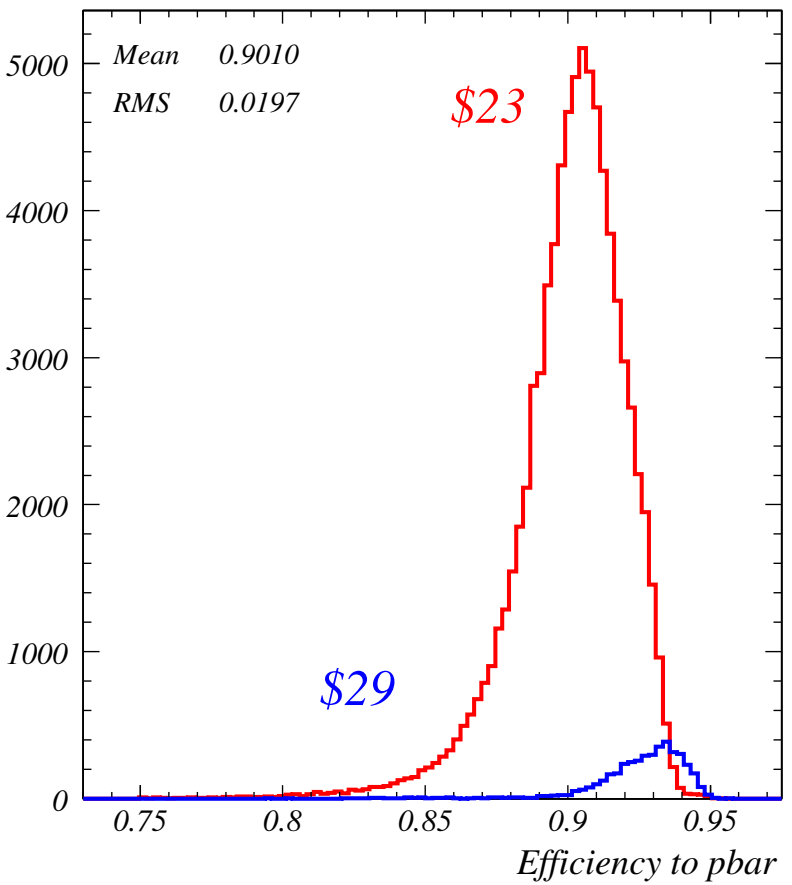
Beam to pbar



Slip-stacking efficiency



- New Booster bunch rotation scheme in second half of the week
- Efficiency largely unchanged, but size of low tail reduced
- Recall 95% efficiency is target

NuMI

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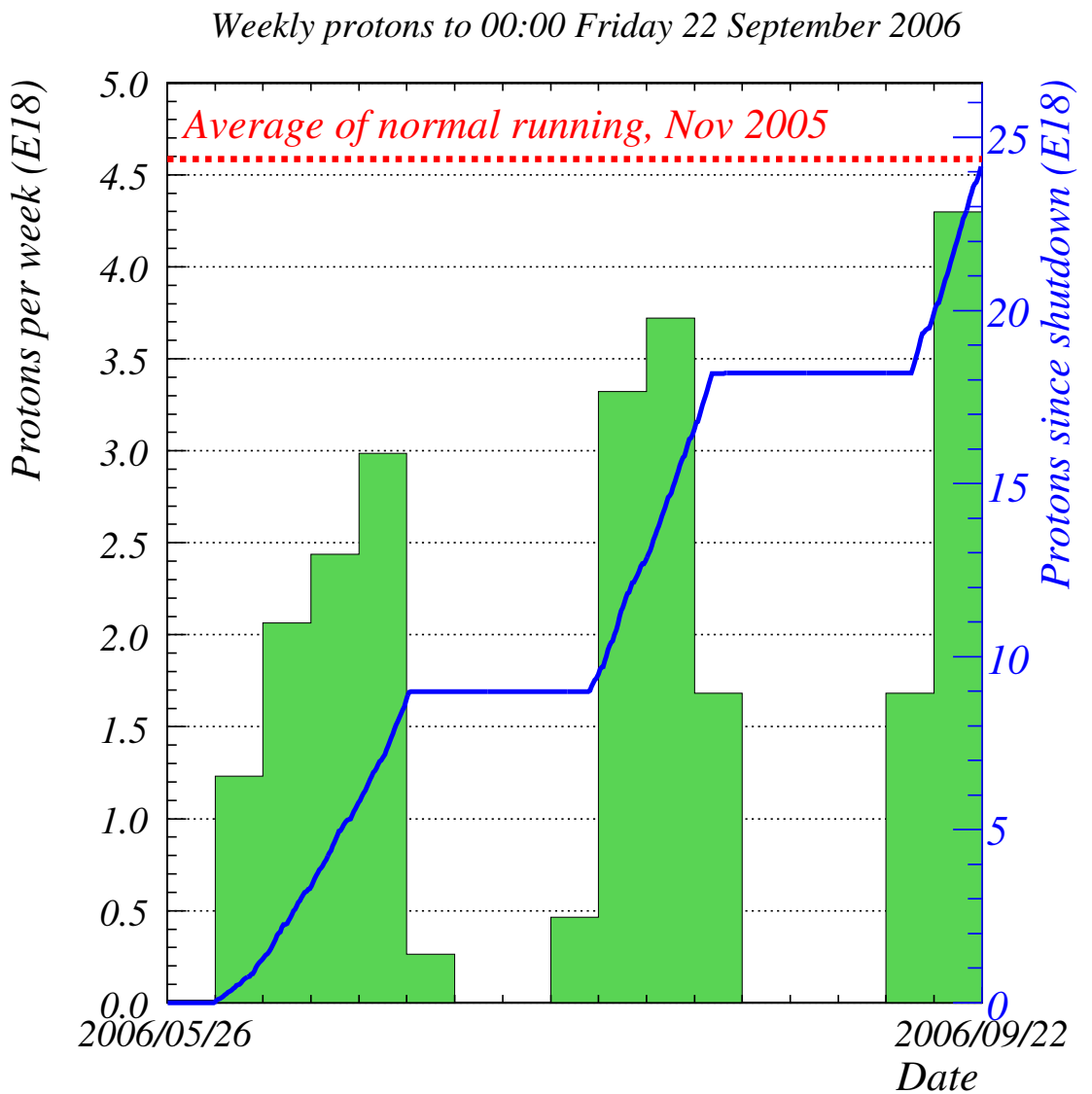

- Expect NuMI to reach DOE goal (10^{20} protons in fiscal year) next week
- Not quite reached pre-long shutdown beam power (152 kW this week, 170 kW before shutdown)
- Per-pulse intensity down a few percent on last year
- Mean cycle spacing was 2.3 s in February, 2.5 s now

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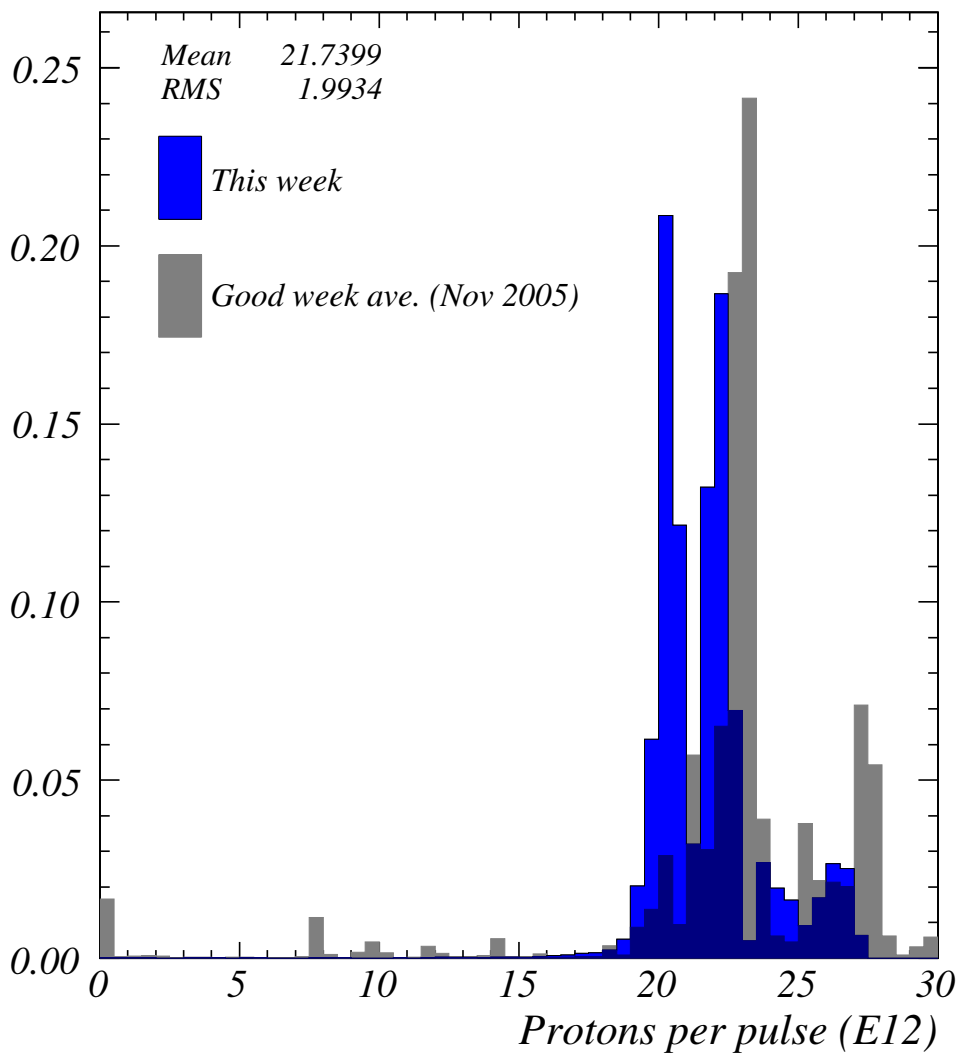

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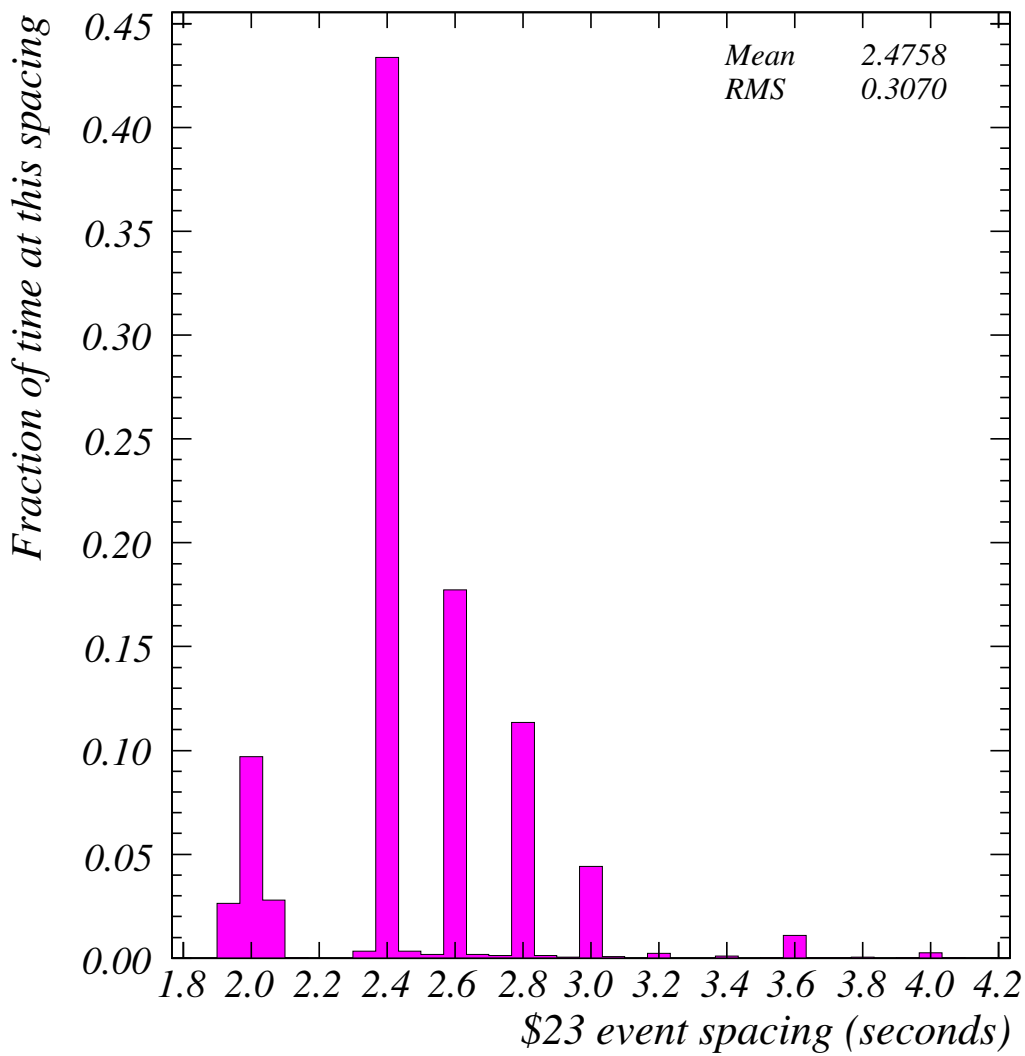

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Pbar shots

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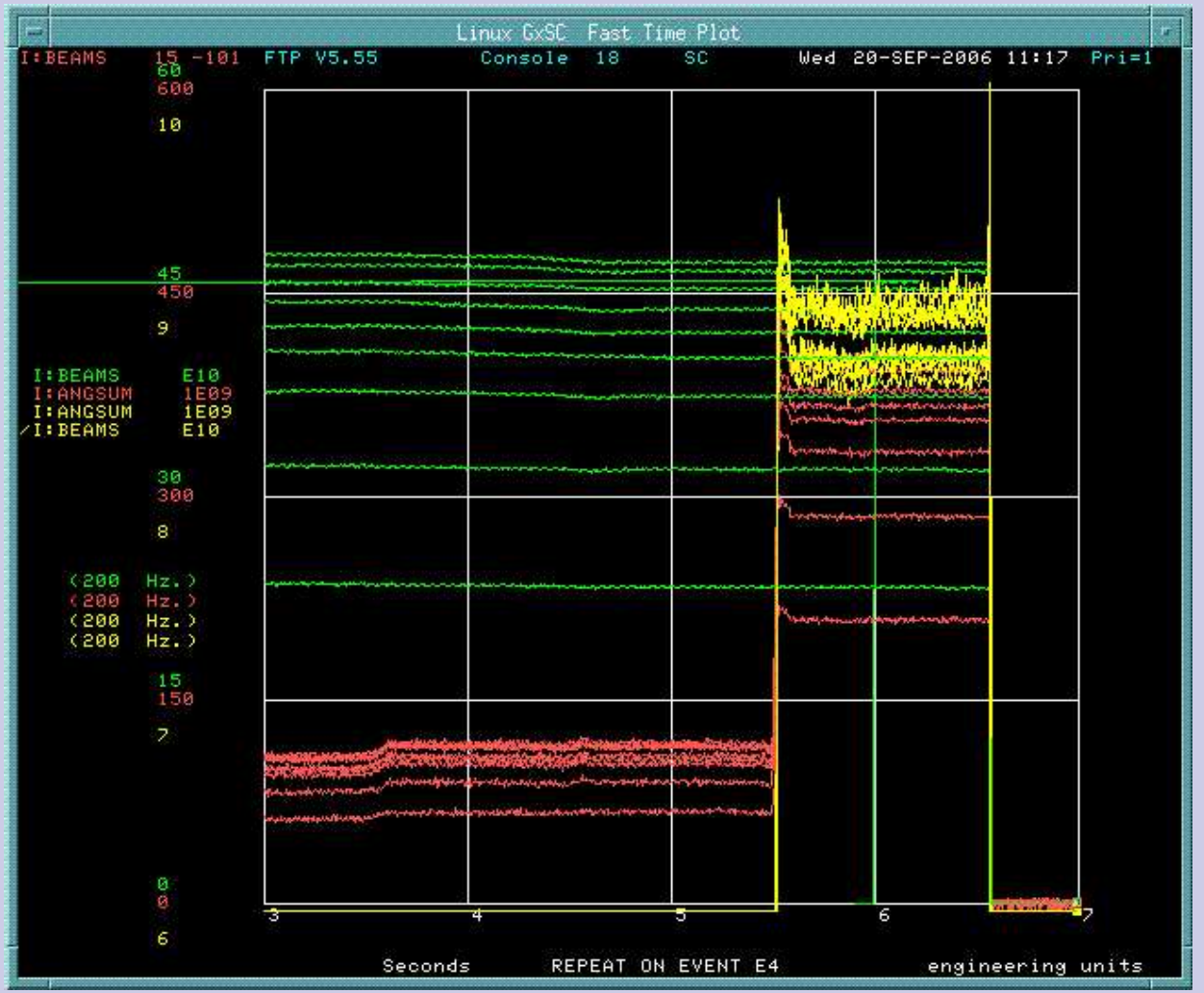

- Coalescing generally close to 90% for both protons and pbars
- Coalescing bad on Sunday—alignment was off by 3 ns
  - ⇒ Magically came back on Monday—still no explanation
- Record store had more than 10% more pbars than previous best store
  - ⇒ Coalescing 86%-90%
  - ⇒ 1% lifetime loss at 8 GeV at high intensity

Studies

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- Multibatch slip-stacking
  - ⇒ Making progress, studies ongoing
- MI8 lattice measurements
- MI8 autotune
  - ⇒ Successful test with 2 correctors. More to come
- BPMs
  - ⇒ Installing filters for 2.5 MHz mode
    - 60N and S houses done
    - The rest to come—one day per house
  - ⇒ Transition board gains adjusted

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